

REMARKS/ARGUMENTS

Claims 1-23 were pending in the application. By this amendment, claims 1, 3, 5, 9, 10, 14, 15, 17, 18, 20, 21 and 22 are being amended and new claims 24-27 are being added, to advance the prosecution of the application. No new matter is involved.

In the final Office Action of January 27, 2003, claims 1-4 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,789,763 of Kato et al. Claims 5-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,744,824 of Kousai et al. These rejections are respectfully traversed, particularly in view of the claims as amended herein.

Independent claims 5, 9, 10, 14, 15, 18 and 20-22 relate to a display device. Such claims are being amended herein to recite that the direction of extension of the video signal line (for example, the line shown in Fig. 9 with a reference numeral 19 to which R,G, and B video signals are supplied from outside) is neither parallel with nor orthogonal to a channel width direction of a second thin-film transistor. Similarly, independent claims 1 and 3 are being amended to recite that in at least the semiconductor elements, among the plurality of semiconductor elements, that are connected to a signal line to which data is to be supplied to a drain of a corresponding one of the plurality of semiconductor elements is input and which is common to the plurality of semiconductor elements and that output data from the signal line, a channel width of a channel region is larger than a channel length thereof, and the channel width direction is neither parallel with nor orthogonal to a primary direction of a extension of the signal line.

Neither Kato et al. nor Kousai et al disclose a relationship between the direction of extension of a signal wiring (specifically, a video signal line) which is



formed common to a plurality of first thin-film transistors and to which a data signal (display data) is supplied and the direction of extension of a channel width of a second thin-film transistor for controlling supply of data from the signal wiring to the first thin-film transistor. Kato et al. only discloses a transistor for outputting a "scan signal" to a transistor corresponding to the first thin-film transistor of the present invention which is connected to a pixel electrode. In addition, in Kato et al., the channel width direction of the transistor for outputting the "scan signal" is set either parallel to or orthogonal to the wiring which appears to supply data to the transistors. Kato et al. not only fails to disclose a video signal line (common signal line) for supplying display data (data to be supplied to the drain of the first thin-film transistor) to the first thin-film transistor, but further fails to even suggest a relationship between the direction of extension of the video signal line (common signal line) as conceived in the present invention and the channel width direction of the second thin-film transistor.

Therefore, it would not be obvious for a person of ordinary skill in the art to further consider an arrangement in which the direction of extension of the line and the channel width direction of the second thin-film transistor are neither parallel to nor orthogonal to each other.

The display data to the output video signal line is a signal which determines display (resultant in brightness) in each pixel, and it is very important to precisely supply this signal to the first thin-film transistor. A person with ordinary skill in the art would most likely try to transmit data without attenuation of the signals and with a simple wiring pattern.

In other words, a person with ordinary skill in the art would design the video signal line to which the display data is supplied and the channel of the second thin-film transistor forming a wiring route between the video signal line and the data



line, such that the video signal line and the data line having the primary direction of extension perpendicular to the video signal line are connected with the shortest distance and the simplest pattern as possible. For this purpose, a person of ordinary skill in the art generally arranges the channel width direction of the second TFT to be either parallel to or orthogonal to the extension direction of the video signal line.

Stated yet another way, one of ordinary skill in the art would not be motivated to arrange the direction of the extension of the channel width of the second thin-film transistor "forming a wiring route" from the video signal line to the data line to be neither parallel with nor orthogonal to the direction of extension of the video signal line, as is done in the case of the present invention.

The independent claims are being amended to define the features in accordance with the invention which patentably distinguish over the art. Thus, in the case of claims 1 and 3, each such claim is being amended by adding thereto the recitation "in at least the semiconductor elements, among said plurality of semiconductor elements, that are connected to a signal line to which data to be supplied to a drain of a corresponding one of said plurality of semiconductor elements is input and which is common to said plurality of semiconductor elements and that output data from the signal line, a channel width of a channel region is larger than channel length thereof, and the channel width direction is neither parallel with nor orthogonal to a primary direction of extension of the signal line".

In the case of independent claims 5, 9, 10, 14, 15, 17, 18 and 20-22, each such claim is being amended to further recite "in at least transistors, among said plurality of second thin-film transistors, that are connected to a video signal line to a corresponding one of said first thin-film transistors, a channel width of a channel region is larger than a channel length thereof, and the channel width direction is



neither parallel with nor orthogonal to a primary direction of extension of said video signal line”.

Independent claim 23 currently recites such distinguishing features in accordance with the invention.

New claims 24 and 26 depend from and further define claims 5 and 9, respectively, in terms of “a data line is connected to a corresponding one of said first thin-film transistors, and in at least transistors, among said plurality of second thin-film transistors, that output display data, the channel width direction is neither parallel with nor orthogonal to the column direction of said display device which is the primary direction of extension of said data line”.

New claims 25 and 27 depend from and further define claims 23 and 25, respectively, in terms of “in at least transistors, among said plurality of second thin-film transistors, that are connected to said video signal line and output display data from said video signal line to a corresponding one of said first thin-film transistors, the channel width direction is neither parallel with nor orthogonal to a primary direction of extension of said video signal line”.

The remaining claims depend from and contain all of the limitations of one of the independent claims in the application, so that such claims also clearly distinguish patentably over the art.

In conclusion, claims 1-23 and new claims 24-27 are submitted to clearly distinguish patentably over the art for the reasons discussed herein. Therefore, reconsideration and allowance are respectfully requested.

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance. Reexamination and reconsideration of the application, as amended, are requested.

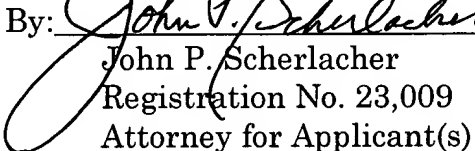


If for any reason the Examiner finds the application other than in condition for allowance, the Examiner is requested to call the undersigned attorney at the Los Angeles, California telephone number (213) 337-6746 to discuss the steps necessary for placing the application in condition for allowance.

If there are any fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-1314.

Respectfully submitted,
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Date: July 28, 2003

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